REMARKS

This amendment, submitted in response to the Office Action dated May 22, 2003, is believed to be fully responsive to each point of rejection raised therein. Accordingly, favorable reconsideration on the merits is respectfully requested.

As a preliminary matter, claims 1-7 have been amended as suggested by the Examiner. Since the claim amendments are merely done to place the claims in proper form, the amendments to the claims should be entered.

Claims 1-7 are all the claims pending in the application. Claims 1-7 have been rejected under 35 U.S.C. §102(b) as being anticipated by Cuk et al. (USP 5,815,380) or Summer (USP 5,282,122). Claim 1 has also been rejected under 35 U.S.C. §102(b) as being anticipated by Brown et al. (USP 5,483,436) or Huykman (USP 5,394,076). Applicant submits the following in traversal of the rejections.

As a preliminary matter, Applicant respectfully requests that Hyukman be added to the Notice of References cited.

In the present invention, a main switch of an auxiliary switch is driven independently such that if the input voltage falls *outside* an allowable input voltage range, a switching signal is generated for driving the main switch according to the fixed duty cycle associated to an end of the allowable input voltage.

Rejection of claims 1-7 as being anticipated by Cuk

Cuk teaches a power supply system having two conversion stages, that is both conversion stages are connected in cascade and, furthermore, each conversion stage includes a switching transistor Q, Qa respectively. See Fig. 7, column 6, line 53 and column 7, line 4. These switches

are driven from a single control circuit by means of two switching signals q, $\bar{q}$ for a given duty cycle. See Fig. 7, column 9, lines 20-32. Cuk regulates against sudden changes of the input voltage by use of the single control circuit which generates two complementary switching signals for a duty cycle. See column 6, line 66 and column 7, line 2. The duty cycle of the main switch Q cannot remain constant when the input voltage is out of the input range voltage, otherwise the output voltage of the second version stage will be unregulated.

Cuk is completely silent about independently driving the main switch of the auxiliary switch when the input voltage falls *outside* the allowed input voltage range. In particular because the purpose of Cuk is regulation against sudden input voltage changes by use of the single control circuit implemented on the first conversion stage so that there is no need for a cross isolation barrier. Column 4, lines 51-59.

In Cuk, the auxiliary switch is driven for obtaining a *regulated* voltage at the output of the second conversion stage. At most, Cuk describes terminating a current source at an instant prescribed by a fixed clock frequency or a fixed internal reference voltage. Column 8, lines 19-30. In order to support an anticipation rejection, the Examiner must establish that all of the elements of the claimed invention are taught in the prior art. Since the Examiner has failed to establish where Cuk discloses independently driving the main switch of the auxiliary switch when the input voltage falls outside the allowed input voltage range, Cuk does not anticipate claims 1-7.

Rejection of claims 1-7 as being anticipated by Summer

Summer describes a flyback converter having on the primary side, one switching transistor coupled in series to a primary winding of a transformer. See Fig. 1. Summer does not

describe obtaining a regulated output voltage when there are changes in the input voltage, that is, when the input voltage falls *outside* the allowed input voltage range. At most, Summer discloses regulation of the output voltage by sampling the output voltage and feeding the voltage back to a pulse width modulation circuit. The circuit then adjusts a flyback duty cycle to maintain a constant output voltage regardless of variations in the magnitude of the input supply voltage and output load. Column 3, lines 60-67.

Moreover, allowable input voltage range is different from an allowable tolerance of a nominal value. As a result, Summer does not teach the elements of the claimed invention and claims 1-7 should be deemed patentable.

Rejection of claim 1 as being anticipated by Brown

Brown discloses a power system receiving a variable input voltage whose nominal value is 55V. The first conversion stage is a boost circuit, serially coupled to a second conversion stage which is an inverter 60. Note that the voltage source which provides a 55V is a battery, hence this type of voltage source never provides input voltage falling outside the voltage range of the battery. See column 3, lines 50-53. Consequently, Brown does not teach a solution involving fixing the duty cycle of the main switch to the duty cycle associated to an end of the input voltage range when the input voltage falls outside the input voltage range as described in the present invention. Therefore, Brown does not anticipate claim 1.

Rejection of claim 1 as being anticipated by Huykman

Huykman teaches a power supply receiving power from a battery having a wide range of output voltage from 12V to 42V. Huykman suffers from the same deficiency as Brown, in that a

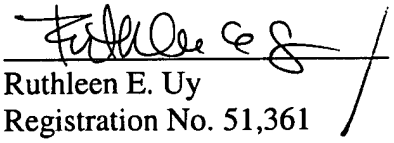
first voltage is never outside a predetermined range of voltage values. Therefore, Huykman does not anticipate claim 1.

Furthermore, none of the references cited by the Examiner describe that for each voltage range on the input there is a corresponding duty cycle and driving the switch of the first conversion stage when the input voltage falls outside the input voltage range. Furthermore, none of the references describe a second conversion stage receiving an input voltage falling inside the intended input voltage range. Therefore, a person skilled in the art is not likely to use any of the references cited by the Examiner, alone or in combination, to teach the elements of the present invention.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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